PUBLIC HEALTH RESEARCH

Reporting System as a Predictor for Patient Safety Perception at Primary Health Care Centres

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ABSTRACT

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Introduction Incident reporting system is used to capture information on patient safety incidents. The reporting system was used as a way to address patient safety incidents. The implementation of a systematic reporting system reduced the likelihood of adverse events and supported the implementation of patient safety culture. The objectives of the study were to identify correlation between the reporting system and the perception of health workers at Primary Health Care (PHC) Centres.

Methods This research was an analytic research with cross sectional study by survey design. The study population was health workers working at PHC Centres in North and Central Jakarta. Sample determination using purposive sampling method. The questionnaire was used to measure variables according to Likert scale.

Results This research was attended by 30 respondents. The number of respondents in the <35 years and ≥ 35 years group were even. Respondents' competency was quite balance in the medical and non-medical groups. Mean of perception 14.1 and median 15. Reporting system ($p = 0,048$; $r = 0,505$) correlated significantly with health officer perception about patient safety.

Conclusions Reporting system was strong predictor to perception. It was necessary to apply non-blaming culture to address the reporting of patient safety incidents.

Keywords Patient safety - Perception - Reporting system.

INTRODUCTION

A *primary health care centre* is a health service facility that provides the initial community and individual health service in order to support the realization of healthy community. First-level personal health services were conducted in the form of outpatient, emergency services, one-day care, home care; and / or hospitalization.[1]

In carrying out its functions, Primary health care centre was authorized to provide health services that prioritize the safety of the patients, officers and visitors.[1] This was in line with the Law of the Republic of Indonesia Number 36 Year 2009 on Health especially Article 54 paragraph (1) stating that the implementation of health services must be carried out safely and with quality.[2]

However, in reality, sometimes incidents on patient's safety occur accidentally which could actually be prevented.[3] The resulting consequences vary greatly, i.e. incidents without injury up to serious injury and even death[4]. Research in the UK said that the incidence of adverse events in the primary care unit was 0.6%[5]. One-third of these adverse events have negative impacts on patients, while a quarter of them have negative impacts on health providers.[6]

To avoid the occurrence of adverse events, it was necessary to build a patient safety culture. Patient safety culture referred to the steps taken to consider and implement patient safety within the organization.[7] Several ways could be done to build patient safety culture, among others by building awareness of patient safety value, leading staff, integrating risk management activities, developing reporting systems, communicating with patients, and implementing patient safety systems.[3]

There were still a few researches on patient safety in developing countries.[8] While the existing health problems were very complex. It started from inadequate facilities, poor performance due to low payment and motivation, as well as limited drug supplies that potentially lead to a patient safety incident.[9]

From the background above, it appeared that to be able to provide safe services at the Primary health care, it required a patient safety culture. There were still a few researches on patient safety culture in developing countries so it was necessary to do more researches on patient Safety Culture in Primary health care.

The objectives of the study were to identify correlation between the reporting system and the perception of health workers at Primary Health Care Centres.

METHODS

This research was an analytical study with cross sectional study through survey by filling up questionnaire. The study populations were health officers working in *Primary health care centres* in both North and Central Jakarta. Age inclusion criteria <35 and ≥ 35 years old; working tenure <2 and ≥ 2 years; service and support work units, employment status of civil servants and honorary staff; high school educational level/equivalent, Diploma, S1 and S2/specialist; as well as medical and non-medical competencies. Exclusion criteria were employees who refuse to participate or were not at work site during the data retrieval period (on leave, permit or out of office assignment). Samples were taken by purposive sampling about 5-10 people per provider. About 4 *primary health care centres* (2 provider located in North Jakarta, the others located in Central Jakarta) were chosen because of teaching centres status.

The data findings were quantitative data from the questionnaires. Questionnaire was used to collect quantitative data. Prior to use, the questionnaire was put on trial. Respondents filled out the questionnaire with a Likert scale with 5 points (strongly agree), 4 points (agree), 3 points (undecided), 2 points (disagree), and 1 point (strongly disagree).

The validity and reliability test of the questionnaire has been done and it was obtained 8 valid and reliable questions. Among those questions were 5 questions about the reporting system and 3 questions about implementation perception of patient safety culture. For measuring reporting system, workers were asked about motivation been given to report incidents, incident report arrangements, the reports will be followed up soon, the reports will improve quality of care and worried because of reporting incidents. Perception about patient safety were measured by these following questions; patient safety must be applied continously and it was the main quality indicator in PHC centre services.

RESULT

The study was participated by 30 respondents from Central and North Jakarta Public Health Center. Respondents' perceptions score on the implementation of patient safety culture was in the range of 12 to 15. Mean of attitude was 14.1 and median of attitude was 15.

The following was the description of the respondent characteristics.

Tabel 1 Characteristics of Respondents

Character	n (%)	Perception Score Average (max score = 15)	P
Age			
< 35 years old	17 (56.7%)	14	0.397

≥35 years old	13 (43.3%)	14.3	
Total	30 (100%)		
Working tenure			
< 2 years	8 (26.7%)	13.75	0.238
≥ 2 years	22 (73.3%)	14	
Total	30 (100%)		
Gender			
Male	9 (30%)	13.8	0.310
Female	21 (70%)	14.2	
Total	30 (100%)		
Marital Status			
Not married	7 (23.3%)	13.8	0.238
Married	23 (76.7%)	14.2	
Total	30 (100%)		
Educational background			
SMA-Diploma	10 (33.3%)	14.3	0.400
S1-S2	20 (66.7%)	14.05	
Total	30 (100%)		
Competencies			
Medical	18 (60%)	14	0.331
Non-medical	12 (40%)	14.3	
Total	30 (100%)		

Table 1 showed that the proportion of respondent's age in the group <35 years old was 56.7% and ≥35 years old was 43.3%. Respondents who had been working for ≥ 2 years were as many as 22 people (73.3%) and 21 female respondents (70%) were more than male respondents. The majority of respondents were married and undergraduates. Respondent Competency was quite balanced in both medical and non-medical groups. Medical competencies included general practitioner and dentist. Non-medical competencies were nurse, dietician, and radiologist.

The bivariate analysis using Mann-Whitney test showed that there was no difference of perception based on the characteristic of age, working tenure, gender, marital status, education and competence (p> 0.05). Perceptions of implementing the patient safety culture were analyzed using Spearman's correlation test in its correlation with the reporting system. The result was shown in the table below.

Table 2 Bivariat analysis predictors and the health officers' perception on patient safety

Independent Variable	P
Reporting system	0.001
Leadership	0.056
Communication among workers	0.121

Spearman corelation test was used to identify the predictor for perception. Bivariat analysis found that reporting system had correlation with dependent variable.

Table 3 Multivariat analysis predictors and perception about patient safety

Independent Variable	P	r
Reporting system	0.048	0.505
Leadership	0.376	
Communication among workers	0.652	

Based on table 3, the reporting system was significantly correlated with health officer perception about the implementation of patient safety system (p=0.048). R value showed 0.505 which means strong correlation. Patient safety was an issue in health care service because of the high number of patient safety incidents. Therefore, several regulations were set up which support the implementation of patient safety in tertiary, secondary and primary health care services.[9]

Primary health care regulated the reporting procedure while the incident handling was conducted immediately after reporting. The reporting was useful for improving the service of primary health care. So, the health officers were not worried about reporting the incident. In

primary health care services, patient safety remains as the top priority. This was in accordance with the Law of the Republic of Indonesia Number 29 Year 2004 article 2 that stated: medical practices should be based on the protection and safety of patients.[10] This value had been taught to medical students and other health-related students. Provision of education on patient safety has an impact on knowledge, attitude and behavior of health personnels so that in this research, perception score on patient safety implementation was good and there was no difference of perception among health officer ($p > 0.05$).

DISCUSSION

From analysis, it was found a significant positive correlation between reporting system with perception of patient safety culture among health officers. This meant that if the implementation of the reporting system was good, then the perception of patient safety would also be positive. A research in Sweden found that incident reporting was important for achieving the current level of patient safety[11].

A study in Turkey found that perceptions about patient safety culture did not differ in some professions (general practitioners, nurses and midwives) in health providers. The reporting of patient safety incident received the lowest positive perception. This meant that the majority of health officers did not report in case of an incident. In addition, feedback on the reporting was also minimum.[12]

The patient safety incident was any unintentional incident and conditions that resulted or potentially resulted a preventable injury to the patient.[3] Conventional methods used to overcome the patient safety incident were personal approaches such as "blaming culture". But this blaming culture was considered less effective because it did not result in a system improvements. Changing the work environment was easier than changing a person's habit.[13]

Evidence in Qatar showed that majority (76%) of 1604 respondent gave negative response in the non-punitive responses to errors, only 24% gave positive response.[14] It meant that punitive response still be habit in a major number.

Someone would feel ashamed of being blamed while the potential occurance for the same mistakes could still come from other health staff. So, health staff would be reluctant to report in cases of patient safety incidents for fear of being blamed. As a result, the learning process and system improvement would be hampered. Therefore, the handling of patient safety cases was no longer a personal approach but with a systems approach.[4]

The principle used to improve patient safety was to understand that patient safety incidents were not only caused by a single factor such as individual factor only, working environment conditions only or management decisions only. Patient safety incidents could be caused by several factors so that the source of the problem needs to be determined and corrected.[9]

Several strategies to implement incident reporting were anonymous reporting, immediate feedback, and informing the benefits of incident reporting. Frequently reporting near-injury/potential injury events could improve patient safety.[3] An effective reporting system should fulfil these indicator, such as protects the privacy of staff, reports should be received from a broad range of personnel, the reports' summaries must be disseminated as soon as possible, and there were structured mechanism for repairing the error.[15]

This research also focus on perception about patient safety among health workers. Perception was one of the contributing factor for patient safety practice. It because perception was closer to the practice than knowledge. A study revealed that perception about the importance of patient safety affected the practice of patient safety management. In addition, it indicated a need for developing strategies to improve perception of the importance of patient safety management.[16]

CONCLUSION

Perceptions of health officers at primary health care in North and Central Jakarta showed positive results. Reporting system had significant and strong correlation to perception ($p=0.048$; $r=0.505$). So, the better the implementation of reporting system the more positive the perception of health officers on patient safety culture. The way organizations overcome patient safety incidents needed to be conducted with a systems approach and not with blaming culture.

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